

## SERVICE FOR YOUR NADY AUDIO PRODUCT

**(U.S.)** Should your WA-1620U product require service, please contact the Nady Service Department via telephone at (510) 652-2411, or e-mail at [service@nady.com](mailto:service@nady.com).

**(International)** For service, please contact the NADY SYSTEMS distributor in your country through the dealer from whom you purchased this product.

DO NOT ATTEMPT TO SERVICE THIS UNIT YOURSELF AS IT CAN BE DANGEROUS AND WILL ALSO VOID THE WARRANTY.



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# WA-1620U

*32 Channel UHF Portable Wireless Amplifier*



## USER MANUAL

## FEATURES

Congratulations and thanks for your purchase of the Nady WA-1620U 20W wireless portable PA. This unit incorporates the latest in UHF PLL wireless technology to provide years of high performance, and offers the following additional advanced features:

- Operates on 32 switchable channels within select 9.3Mhz wide bands in the UHF (745-754.3Mhz) range for maximum freedom from potential interference and optimum choice of clear channels.
- Phase locked loop PLL circuitry for easy, precise channel selection and top performance
- Auto-Search™ feature for easiest automatic clear channel selection and setup in any location
- Full LCD display shows channel selected, RF signal strength, audio level and battery status, as well as useful icons for easy channel selection
- State-of-art infrared transfer of channel-selected data between the receiver and transmitters automatically locks in transmitters to proper channel
- ToneSquelch™ eliminates interference from other RF sources
- Compact, aesthetic receiver with hidden internal antenna can be shoulder hung, hand held or placed on a desk
- Receiver's large capacity built-in battery offers maintenance-free operation in all types of applications and is easily charged from external AC through its internal AC adapter supply
- Convenient auxiliary audio input and output for maximum versatility for many applications, including use simultaneously with the built-in wireless mic and external source wired mic or Walkman or CD players. Can be hooked up to more powerful external audio amps for applications requiring more audio levels than produced by the built-in 20W audio amp.
- Transmitters operate with alkaline or rechargeable NiCad or NiMH batteries. Handheld microphone uses a single AA and the bodypack uses two AA's.

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## RECHARGING THE RECEIVER'S BATTERY

- Press the lock of the Power Cord Compartment Cover (11) to open, remove the power cord and insert its plug into an AC outlet. Do not press the Power Switch (1)

*NOTE: To avoid long term damage to the battery, please charge the battery to full whenever the voltage is low or at least once every 3 months when not in use. It takes about 6-7 hours to charge a depleted battery. The internal charger charges quickly at first and then automatically adjusts to smaller currents as the battery become fully charged. This prevents damage to the battery if left on charging for too long.*

## SPECIFICATIONS

### WA-1620U RECEIVER/AMPLIFIER

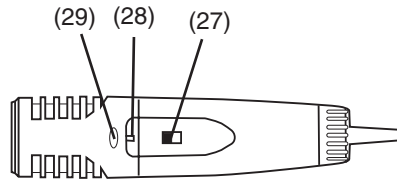
POWER .....	Internal rechargeable battery (12V 1.9AH) Internal AC power: 110V~220V, 50HZ~60HZ
FREQUENCY CHANNEL .....	32 channel
FREQUENCY RANGE .....	UHF 745-754.3MHz
RECEPTION MODE .....	PLL Digitally Locked
OUTPUT POWER .....	20W (max)
FREQUENCY RESPONSE .....	40Hz-16KHz ± 2dB
SENSITIVITY .....	10dBu
DIMENSIONS .....	8.1" x 3.5" x 9.5" (205mm x 90mm x 240mm)
WEIGHT .....	6.2 lbs (2.8 Kg), with battery

### WH-16U/WL-16U TRANSMITTERS

POWER .....	Alkaline or rechargeable NiCad or NiMH battery "AA" battery WH-16U Handheld: 1.2V-1.5VDC (one AA battery) WL-16U Bodypack: 1.2V-1.5VDC x2 (two AA batteries)
BATTERY LIFE .....	WH-16U Handheld: 15 hrs; WL-16U Bodypack: 30 hrs
TRANSMITTED OUTPUT POWER .....	10dBm
SPURIOUS EMISSIONS .....	>50dB
DIMENSIONS .....	WH-16U Handheld TX: 1" x 5" (26 x 128mm) WL-16U Bodypack TX: 2.6" x 3.6" x 1" 66mm x 23mm x 91mm
WEIGHT .....	WH-16U Handheld TX: 1.0 oz. (50g) WL-16U Bodypack TX: 2.5 oz.(70g), without battery

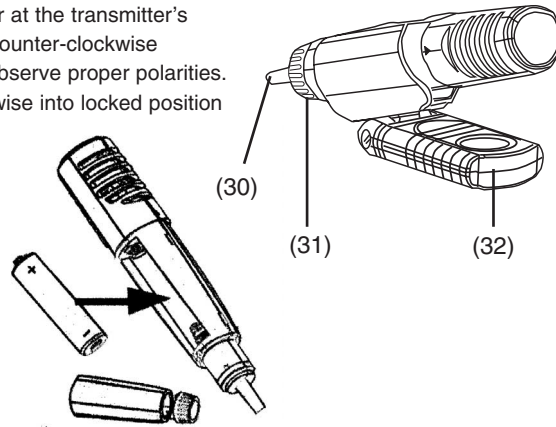
## CONTROLS FOR THE WH-16U HANDHELD MICROPHONE

- (27) Microphone Power Switch
- (28) Microphone Power Indicator
- (29) Microphone Infrared Wire Interface
- (30) Antenna
- (31) Bracket Connection
- (32) Mic Stand Clip



### BATTERY INSTALLATION

- Remove the aluminum battery cover at the transmitter's base by rotating the locking rotary counter-clockwise
- Insert the batteries, taking care to observe proper polarities.
- Replace the cover and rotate clockwise into locked position

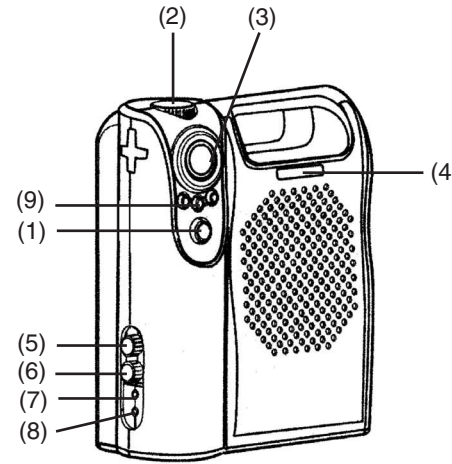


## OPERATING THE WH-16U HANDHELD MICROPHONE

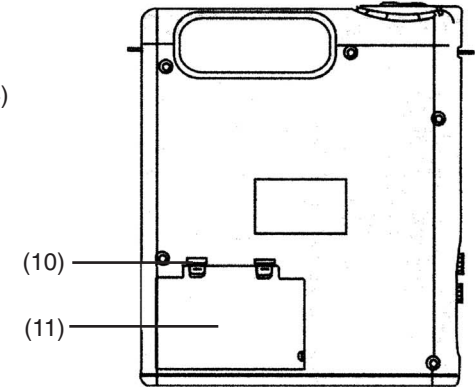
- Press the Transmitter Switch (27) to "ON". The Indicator (20) will light for about two seconds indicating useable battery strength for operation and then shut off.

*NOTE: If the Power Indicator (28) doesn't light momentarily when first turning on the unit or flashes during use, please change the batteries. If it lights all the time, please re-adjust the channel again. To avoid feedback whistling or howling, keep the mic behind the receiver's speaker and at least 5-10 feet away. Adjust positions and volume as needed to eliminate feedback interference.*

## CONTROLS FOR THE WA-1620U RECEIVER/AMPLIFIER

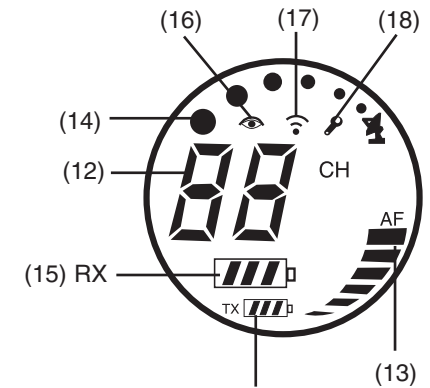


FRONT FACE



BACK

- (1) Power Switch
- (2) Main Volume Control
- (3) LCD Interface
- (4) Infrared Wire Interface of the Receiver
- (5) Tone Control
- (6) Auxiliary Input Volume
- (7) Auxiliary Input Jack
- (8) Auxiliary Output Jack
- (9) LCD Function Setup Key
- (10) Fasteners of Power Cord Compartment
- (11) Power Cord Compartment
- (12) Channel Display
- (13) Audio Level (AF) Display
- (14) Signal Strength (RF) Display
- (15) Battery Status Display (RX-TX)
- (16) Auto-Search Open Channel Indicator
- (17) RX-TX Infrared Link Indicator
- (18) Manual Channel Select Indicator



LCD INTERFACE

## OPERATING THE WA-1620U RECEIVER/AMPLIFIER

- Press the Power Switch (1) to turn on the receiver.
- The LCD display will display the channel and battery status.
- Adjust the Volume Switch (2) for the level desired.

*NOTE: If the LCD display doesn't display the unit's battery is low. Please charge first before using, after turning the unit off with the power switch (1). The WA-1620U will automatically shut off when power is too low for operation and must be recharged before further usage. The unit can also be used with the AC power, and such operation will also charge the battery simultaneously while using. If the unit is amplifying continuous high audio levels then the internal AC adapter may not provide enough power for full operation and you'll need to let battery charge for a while to build up a power reserve before using again with AC.*

### **Adjusting Frequency Channel** **Auto-Searching For Open Channels**

Continuously press the button labeled "OK" for 3 seconds. "👁️" will appear and flash on the screen. Release pressing "OK". The WA-1620U receiver will go into Auto-Searching Status. The buzzer will sound continuously when the receiver has found an open channel.

### **Changing the Transmitter Channel Automatically**

After the receiver's channel has been selected above, and the receiver is still buzzing, hold the Infrared Wireless Interface (20 & 29) of the transmitter (body pack or handheld mic) several inches from the Infrared Wireless Interface (4) of the receiver. Turn on the switch (19 or 27) of the body pack or handheld transmitter and wait a few seconds for the receiver buzzing to stop, which signals the successful programming of the channel selected on the receiver into the transmitter.

*NOTE: Please avoid doing the above in bright sunlight as it may effect the infra-red data transfer.*

### **Selecting the Receiver's Operating Channel Manually**

- Press "▶" for three seconds to enter into the function setup mode
- Select Manual Channel Select mode "🔑" by using and "◀" "▶"
- Press "OK" to select the channel displayed. It will change every time "OK" is pressed
- Select the Infrared Link mode "📶" by using "◀" "▶" and press "OK," the buzzer will sound continuously. Proceed to transfer this channel info to the wireless microphone or the body pack transmitter as above.

### **Operating with Auxiliary Equipment**

#### **Operating the Audio Input**

- Insert the audio input, such as from a wired microphone, Walkman or CD player into the Auxiliary Input (7)
- Adjust the Auxiliary Volume Control (6) of the Auxiliary Input

#### **Operating the Audio Output**

- Auxiliary Output (8) is the output jack of the audio signal and can be connected with amplifying and recording equipment

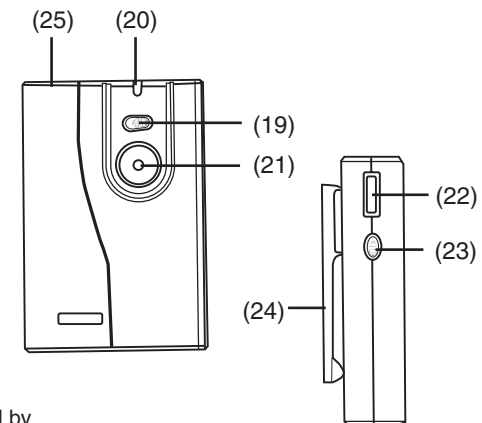
*NOTE: The Main Volume Rotary control (2) should be used to adjust the audio output volume*

### **Methods for Increasing the Audio Volume**

- A single wireless microphone can be used simultaneously with any number of receivers on the same frequency for added amplification of the volume in a given location.
- Higher power audio amplifiers can also be connected to the Output (8) for increased loudness.

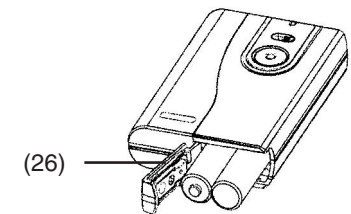
## CONTROLS FOR THE WL-16U BODYPACK TRANSMITTER

- (19) Power Switch
- (20) Power Indicator
- (21) Infrared Wire Interface of the Transmitter
- (22) Volume Control
- (23) Volume Lock
- (24) Strap Clip
- (25) Lavalier Microphone Jack



### **BATTERY INSTALLATION**

- Press the Battery Cover (26) outward as indicated by the embossed arrow to pop open the battery compartment
- Insert the batteries. (Pay attention to the correct polarity.) Close and slide the battery cover back to the locked position



## OPERATING THE WL-16U BODYPACK TRANSMITTER

- Insert the Lavalier Microphone into the transmitter's microphone jack (25)
- Press the Transmitter Switch (19) to "ON". The Indicator (20) will light for about two seconds indicating useable battery strength for operation and then shut off.
- Space the microphone about 6-12 inches from the mouth for best sound.
- To adjust the transmitted volume level for best audio, press the Volume Lock switch (23) on the side of the transmitter to "H or L", and then the Volume Adjusting Rotary control (22) can be adjusted for optimum audio. If the sound is distorted, either move the mic farther from the mouth or turn down this control (22) to lower the audio level input to the transmitter.

*NOTE: If the Power Indicator (20) doesn't light momentarily when first turning on the unit or flashes during use, please change the batteries. If it lights all the time, please re-adjust the channel again. When the power switch is on "ST," then the receiver will be on mute status, and the system will be quiet and operating without sound. To avoid feedback whistling or howling, keep the mic behind the receiver's speaker and at least 5-10 feet away. Adjust positions and volume as needed to eliminate feedback interference.*